

Spark Gap

Volume 24, Issue 1, January 2007



MARC in 2007

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2007 begins the 24th year MARC has been in existence. This is quite an accomplishment and comes at a time when Amateur Radio has just com-

pleted 100 years on the air. The year is already shaping up to be a busy one. Technician class dates and location are announced elsewhere in this issue as class preparations are being completed. We still need someone to teach Chapter 7 on RF Safety so contact KC9GCH, Linda Harshbarger, if you are willing to teach on this topic. Watch for an announcement about the spring National Weather Service spotter talks. It's almost time for the annual training session on what is happening with local weather and to update personal knowledge of what to look for and report.

Our Sunday net can still use some volunteer control net operators. Please make plans to operate the net at least once this year. Thanks to those who have been keeping this on the air each Sunday evening.

FCC Update

In December 2006 the Federal Communication Commission announced that it intends to remove the Morse Code testing requirements for both General and Extra license classes. As we go to print the formal announcement has not yet appeared in the Federal Register but we look for it any day. Once published in the Federal Register it should become final 30 days from that publication. As soon as it appears, we will make the text available on our club website.

January

MARC members are on alert as this goes to print for possible heavy rains and flash flooding in the county as another series of weather fronts moves through the area. This is a great opportunity to work with our county EMA and test our emergency preparedness readiness.

February

24th anniversary of the club on February 18th. Technician classes begin February 21st at the White River Township Library on SR135 and Smith Valley Road. Classes will be held 2 nights in February, 2 nights in March, 3 nights in April and 1 night in May. See our club website for details.

March

Columbus Hamfest – March 31st – Once again we will have our VE team and they are expecting to be busy now that the FCC (Federal Communication Commission) has announced an end to mandatory Morse Code testing for General and Extra licenses. VE team members and MARC officers have been receiving inquiries into the change and expected testing dates and locations. We will have 2

Technician classes this month.

April

Technician classes will be held 3 nights this month.

May

Once again MARC will be represented with volunteers working both the Mini-Marathon on May 5th and the 500 Festival Parade on May 26th.

This is a great opportunity to work with the Marion County Amateur

Radio and Emergency Management EMA. Our last Technician class will be held this month.

June

June starts off with the White River Township Strawberry Festival on Friday, June 8th and Saturday, June 9th. The WRT fire department already has their flyer available on-line at <http://www.wrtfd.org/festival.htm> and it mentions Ham Radio demonstrations on Saturday.

June brings us Field Day (June 23 & 24) and our President, JR Osborne, KB9HSE, is promising opportunities to fully test our emergency communications capabilities. Now is a good time to step forward and volunteer to assist with planning. Good news! The Greenwood Freedom Festival (June 28 & 29) is scheduled for the last weekend of the month and for once does not coincide with Field Day. This means we can make both events without splitting up our resources.

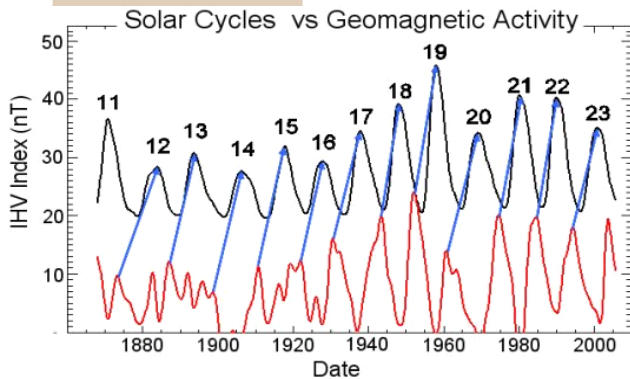
MARC 2007 Events

*The Official
Newsletter of the
Mid-State Amateur
Radio Club*



Mid-State Amateur
Radio Club
P. O. Box 836
Franklin, IN 46131
www.midstatehams.org

Science@NASA - Update on next solar cycle



Dec. 21, 2006: Evidence is mounting: the next solar cycle is going to be a big one.

Solar cycle 24, due to peak in 2010 or 2011 “looks like its going to be one of the most intense cycles since record-keeping began almost 400 years ago,” says solar physicist David Hathaway of the Marshall Space Flight Center. He and colleague Robert Wilson presented this conclusion last week at the American Geophysical Union meeting in San Francisco.

Their forecast is based on historical records of geomagnetic storms.

Hathaway explains: “When a gust of solar wind hits Earth’s magnetic field, the impact causes the magnetic field to shake. If it shakes hard enough, we call it a geomagnetic storm.” In the extreme, these storms cause power outages and make compass needles swing in the wrong direction. Auroras are a beautiful side-effect.

Hathaway and Wilson looked at records of geomagnetic activity stretching back almost 150 years and noticed something useful: “The amount of geomagnetic activity now tells us what the solar cycle is going to be like 6 to 8 years in the future,” says Hathaway. A picture is worth a thousand words:

In the plot, above, black curves are solar cycles; the amplitude is the sunspot number. Red curves are geomagnetic indices, specifically the Inter-hour Variability Index or IHV. “These indices are derived from magnetometer data recorded at two points on opposite sides of Earth: one in England and another in Australia. IHV data have been taken every day since 1868,” says Hathaway.

Cross correlating sunspot number vs. IHV, they found that the IHV predicts the amplitude of the solar cycle 6-plus years in advance with a 94% correlation coefficient.

“We don’t know why this works,” says Hathaway. The underlying physics is a mystery. “But it does work.”

According to their analysis, the next Solar Maximum should peak around 2010 with a sunspot number of 160 plus or minus 25. This would make it one of the strongest solar cycles of the past fifty years—which is to say, one of the strongest in recorded history.

Astronomers have been counting sunspots since the days of Galileo, watching solar activity rise and fall every 11 years. Curiously, four of the five biggest cycles on record have come in the past 50 years. “Cycle 24 should fit right into that pattern,” says Hathaway.

These results are just the latest signs pointing to a big Cycle 24. Most compelling of all, believes Hathaway, is the work of Mausumi Dikpati and colleagues at the National Center for Atmospheric Research (NCAR) in Boulder, Colorado. “They have combined observations of the sun’s ‘Great Conveyor Belt’ with a sophisticated computer model of the sun’s inner dynamo to produce a physics-based prediction of the next solar cycle.” In short, it’s going to be intense. Details may be found in the Science@NASA story [Solar Storm Warning](#).

“It all hangs together,” says Hathaway. Stay tuned for solar activity.

Note: This story was provided by Bob LaGrange, N9SIU.

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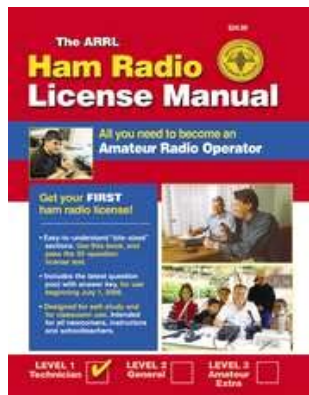
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Technician Class Begins February 21st



The next Technician Class will begin February 21st. We have secured the Community Room at the White River Township Library at SR135 and Smith Valley Road. Classes will be held on Wednesdays but because we could not secure the room for eight (8) consecutive weeks we will meet over an 11 week period for eight classes, each on a Wednesday evening. The first 7 classes will follow the new manual with the 8th week either a final review and question session or depending on the number of students ready to take their test, the VE team will be asked to have a special testing session, if available. Each class will start at 7:00 pm and end just prior to 9:00 pm. Part of the requirements of reserving the room is that everyone is out of the building by 9:00 pm and the room cleaned up at that time.

Classes and Instructors are as follows:

Welcome to Amateur Radio, February 21, 2007 (Chapter 1 - Week 1) - Instructor Linda Harshbarger, KC9GCH.

Radio and Electronic Fundamentals, February 28, 2007 (Chapter 2 - Week 2) - Instructors Chris Frederick, KG6ZIJ and Robert Boyce, KC9KFT.

Operating Station Equipment, March 21, 2007 (Chapter 3 - Week 3) - Instructor Bob

LaGrange, N9SIU

Communicating With Other Hams, March 28, 2007 (Chapter 4 - Week 4) - Instructor Matt Payne, KB9UJE.

Licensing Regulations, April 4, 2007 (Chapter 5 - Week 5) - Instructor Dave Wendt, KA9OOH.

Operating Regulations, April 11, 2007 (Chapter 6 - Week 6) - Instructor Jack Parker, W8ISH.

Electrical and RF Safety, April 25, 2007 (Chapter 7 - Week 7) - **Instructor needed!**
Review, Questions & Testing, May 2, 2007 - Mix of above instructors and/or VE team.

Each class will follow one of the 7 chapters in the new manual, with the 8th week devoted to review, conversation, and special presentations and possibly testing if the VE team is available and if we have enough students willing to take their tests..

A flyer will be available on our website and Linda will have copies at the January meeting. Each MARC member is encouraged to hand out as many flyers as possible. Linda will make sure the class information is given to the media. Also contacted will be local Boy Scouts, Girl Scouts and the Girls, Inc. organizations and others.

If our Spring class in its new format goes well, a second class may be planned for September. If enough interest is generated we may also try a General Class this summer.

Help us fill the class with students wanting to get their ticket and help us make sure they are well trained and pass the test with flying colors.

WA9RDF
Repeater
146.835/
146.235 MHz
151.4 Hz PL
Tone

Weekly Net
Every Sunday
at 7PM EST

Tune in to hear
the ARRL
Newsline!

*The Mid-State
Amateur Radio Club
sponsors a weekly
traffic and social net
on our repeater. The
net begins at 7:00
p.m. local time, and
features local news,
announcements, and
NTS traffic, as well
as rebroadcasts of
Amateur Radio
Newsline.*

Weekly Net

Make sure to check out our weekly net, held every Sunday at 1900 (7 PM) local time. This is a great chance to meet other local amateur radio operators and test your operating skills. Newline is often played, allowing net participants to get the latest news about the amateur radio hobby. For those without the license or means to check in over the air, we offer an email check-in. Just send an email with your name and contact information to netcontrol@midstatehams.org and we will record your check-in!



Mid-State Amateur
Radio Club
P. O. Box 836
Franklin, IN 46131
www.midstatehams.org
317.887.2558

Spark Gap

2007 Schedule of Events

Public Service Events and/or Educational/Testing Opportunities

JANUARY 2007

20 **MARC Meeting**

VEC Testing immediately following the meeting (approx. 9:30 am)

Johnson County Emergency Management Agency, 1111 Hospital Road, Franklin, IN

This is the beginning of our 24th year as the Mid-State Amateur Radio Club - let's start to work on 25th year celebration ideas/events!

FEBRUARY 2007

17 **MARC Meeting**

VEC Testing immediately following the meeting (approx. 9:30 am)

Johnson County Emergency Management Agency, 1111 Hospital Road, Franklin, IN

18 **MARC Celebrates 24 years!**

Check out our History webpage for details on that first meeting 24 years ago today.

Congratulations MARC!

21 **Technician Class begins**

White River Township Library Community Room, SR 135 and Smith Valley Road.

Check our website for directions to the Library and for a full schedule of classes.

24 **Cabin Fever Hamfest, LaPorte, IN**

Civic Auditorium, 1001 Ridge Street, LaPorte, IN 46350 - For more information see their website at <http://www.K9JSI.org>; Talk-in will be on 146.610 (PL131.8)

28 **Technician Class - 2nd class**

White River Township Library Community Room, SR 135 and Smith Valley Road.

Check our website for directions to the Library and for a full schedule of classes.

MARCH 2007

17 **MARC Meeting**

VEC Testing immediately following the meeting (approx. 9:30 am)

Johnson County Emergency Management Agency, 1111 Hospital Road, Franklin, IN

21 **Technician Class - 3rd class**

White River Township Library Community Room, SR 135 and Smith Valley Road.

Check our website for directions to the Library and for a full schedule of classes.

28 **Technician Class - 4th class**

White River Township Library Community Room, SR 135 and Smith Valley Road.

Check our website for directions to the Library and for a full schedule of classes.

31 **Columbus Hamfest**

Bartholomew County Fairgrounds, Columbus, IN

MARC will be conducting VE testing at the Hamfest.

Mid-State Amateur Radio Club

The Mid-State Amateur Radio Club meets the **THIRD SATURDAY** of each month in the basement of the Johnson County Emergency Management Agency, 1111 Hospital Road, Franklin, Indiana 46131.

See our website, www.midstatehams.org, for maps on how to get to our